

We claim:

1. A properly folded steroidogenic factor-1 (SF-1)-like receptor variant or active fragment thereof, comprising an amino acid sequence encoding a SF-1-like receptor or an active fragment thereof, said amino acid sequence lacking at least one naturally occurring cysteine residue within the ligand-binding domain of said receptor.
2. The receptor variant or active fragment of claim 1, which exhibits increased monomer stability as compared to analogous receptor retaining all cysteine residues lacking in said variant.
3. The receptor variant or active fragment of claim 1, wherein said cysteine residue is substituted with a non-cysteine residue.
4. The receptor variant or active fragment of claim 1, wherein said SF-1-like receptor is SF-1.
5. The receptor variant or active fragment of claim 1, wherein said SF-1-like receptor is LRH-1/FTF/SF-1 β .
6. The receptor variant of claim 1, 3, 4 or 5, which is an active fragment comprising a ligand-binding domain.

7. The receptor variant fragment of claim 6, which does not contain additional sequence derived from said receptor.

8. The receptor variant of claim 1, 3, 4 or 5, 5 which is an active fragment comprising a ligand-binding domain and activation function 1 (AF1).

9. The receptor variant fragment of claim 8, which does not contain additional sequence derived from said receptor

10 10. The receptor variant of claim 1, 3, 4 or 5, said amino acid sequence lacking at least two naturally occurring cysteine residues within the ligand-binding domain of said receptor.

11. The receptor variant of claim 10, wherein 15 said at least two naturally occurring cysteine residues are substituted with non-cysteine residues.

12. The receptor variant of claim 1, 3, 4 or 5, said amino acid sequence lacking at least three naturally occurring cysteine residues within the 20 ligand-binding domain of said receptor.

13. The receptor variant of claim 12, wherein said at least three naturally occurring cysteine residues are substituted with non-cysteine residues.

14. The receptor variant of claim 3, 11 or 13, wherein said cysteine residue or residues each is independently substituted with an amino acid selected from the group consisting of serine, threonine, alanine, 5 valine, glycine, leucine, isoleucine, tyrosine, phenylalanine, tryptophan, methionine and histidine.

15. The receptor variant of claim 14, wherein said cysteine residue or residues each is independently substituted with serine or threonine.

10 16. The receptor variant of claim 1 or 3, said variant comprising amino acid substitutions at cysteine residues corresponding to C267, C302 and C423 of murine SF-1.

15 17. The SF-1 receptor variant of claim 4, said variant comprising amino acid substitutions at cysteine residues corresponding to C267, C302 and C423 of murine SF-1.

20 18. The SF-1 receptor variant of claim 17, said variant comprising serine substitutions at cysteine residues corresponding to C267, C302 and C423 of murine SF-1.

19. The SF-1 receptor variant of claim 17 or 18, wherein said variant is a human SF-1 receptor variant.

20. The receptor variant of claim 1 or 3, said variant comprising amino acid substitutions at cysteine residues corresponding to C302 and C423 of murine SF-1.

21. The SF-1 receptor variant of claim 4, said 5 variant comprising amino acid substitutions at cysteine residues corresponding to C302 and C423 of murine SF-1.

22. The SF-1 receptor variant of claim 21, said variant comprising serine substitutions at cysteine residues corresponding to C302 and C423 of murine SF-1.

10 23. The SF-1 receptor variant of claim 21 or 22, wherein said variant is a human SF-1 receptor variant.

24. The receptor variant of claim 1 or 3, said variant comprising amino acid substitutions at cysteine 15 residues corresponding to C408 and C413 of murine SF-1.

25. The SF-1 receptor variant of claim 4, said variant comprising amino acid substitutions at cysteine residues corresponding to C408 and C413 of murine SF-1.

26. The SF-1 receptor variant of claim 25, 20 said variant comprising serine substitutions at cysteine residues corresponding to C408 and C413 of murine SF-1.

27. The SF-1 receptor variant of claim 25 or 26, wherein said variant is a human SF-1 receptor variant.

28. A properly folded SF-1 receptor variant or active fragment thereof, comprising an amino acid sequence encoding a SF-1 receptor or an active fragment thereof, said amino acid sequence lacking at least one naturally occurring cysteine residue selected from the group consisting of

5 a cysteine residue corresponding to C408 of murine SF-1 and

10 a cysteine residue corresponding to C413 of murine SF-1.

29. The SF-1 receptor variant or active fragment of claim 28, which exhibits increased monomer stability as compared to analogous receptor retaining all cysteine residues lacking in said variant.

15 30. The SF-1 receptor variant or active fragment of claim 28, wherein said at least one cysteine residue is substituted with a non-cysteine residue.

31. The SF-1 receptor variant or active fragment of claim 28, comprising an amino acid sequence lacking naturally occurring cysteine residues corresponding to C408 and C413 of murine SF-1.

20 32. The SF-1 receptor variant or active fragment of claim 31, said variant comprising amino acid substitutions at cysteine residues corresponding to C408 and C413 of murine SF-1.

33. The SF-1 receptor variant or active fragment of claim 32, wherein each of said cysteine residues is independently substituted with an amino acid selected from the group consisting of serine, threonine, 5 alanine and valine.

34. The SF-1 receptor variant or active fragment of claim 33, wherein each of said cysteine residues is independently substituted with an amino acid selected from the group consisting of serine and 10 threonine.

35. The SF-1 receptor variant or active fragment of claim 34, wherein each of said cysteine residues is substituted with serine.

36. The SF-1 receptor variant or active 15 fragment of claim 28, 33, 34 or 35, which is an active fragment comprising a ligand-binding domain.

37. The SF-1 active fragment of claim 36, which does not contain additional SF-1 receptor sequence.

38. The SF-1 receptor variant or active 20 fragment of claim 28, which is a human SF-1 receptor variant.

39. The SF-1 receptor variant or active fragment of claim 28, which is a murine SF-1 receptor variant.

40. The murine SF-1 receptor variant or active fragment of claim 39, comprising the amino acid sequence SEQ ID NO: 19.

41. A properly folded SF-1 receptor variant or 5 active fragment thereof, comprising an amino acid sequence encoding a SF-1 receptor or an active fragment thereof, said amino acid sequence lacking at least one naturally occurring cysteine residue selected from the group consisting of

10 a cysteine residue corresponding to C267 of murine SF-1;

a cysteine residue corresponding to C302 of murine SF-1; and

15 a cysteine residue corresponding to C423 of murine SF-1.

42. The SF-1 receptor variant or active fragment of claim 41, which exhibits increased monomer stability as compared to analogous receptor retaining all cysteine residues lacking in said variant.

20 43. The SF-1 receptor variant or active fragment of claim 41, wherein at least one naturally occurring cysteine residue is substituted with a non-cysteine residue.

25 44. The SF-1 receptor variant or active fragment of claim 41, comprising an amino acid sequence lacking naturally occurring cysteine residues corresponding to C267 and C302 of murine SF-1.

45. The SF-1 receptor variant or active fragment of claim 44, said variant comprising amino acid substitutions at cysteine residues corresponding to C267 and C302 of murine SF-1.

5 46. The SF-1 receptor variant or active fragment of claim 41, comprising an amino acid sequence lacking naturally occurring cysteine residues corresponding to C267 and C423 of murine SF-1.

10 47. The SF-1 receptor variant or active fragment of claim 46, said variant comprising amino acid substitutions at cysteine residues corresponding to C267 and C423 of murine SF-1.

15 48. The SF-1 receptor variant or active fragment of claim 41, comprising an amino acid sequence lacking naturally occurring cysteine residues corresponding to C302 and C423 of murine SF-1.

20 49. The SF-1 receptor variant or active fragment of claim 48, said variant comprising amino acid substitutions at cysteine residues corresponding to C302 and C423 of murine SF-1.

50. The SF-1 receptor variant or active fragment of claim 41, comprising an amino acid sequence lacking naturally occurring cysteine residues corresponding to C267, C302 and C423 of murine SF-1.

5 51. The SF-1 receptor variant or active fragment of claim 50, said variant comprising amino acid substitutions at cysteine residues corresponding to C267, C302 and C423 of murine SF-1.

10 52. The SF-1 receptor variant or active fragment of claim 45, 47, 49 or 51, wherein each of said cysteine residues is independently substituted with an amino acid selected from the group consisting of serine, threonine, alanine and valine.

15 53. The SF-1 receptor variant or active fragment of claim 45, 47, 49 or 51, wherein each of said cysteine residues is independently substituted with an amino acid selected from the group consisting of serine and threonine.

20 54. The SF-1 receptor variant or active fragment of claim 45, 47, 49 or 51, wherein each of said cysteine residues is substituted with serine.

55. The SF-1 receptor variant or active fragment of claim 41, which is an active fragment comprising a ligand-binding domain.

25 56. The SF-1 active fragment of claim 55, which does not contain additional SF-1 receptor sequence.

57. The SF-1 receptor variant or active fragment of claim 41, which is a human SF-1 receptor variant.

58. The SF-1 receptor variant or active
5 fragment of claim 41, which is a murine SF-1 receptor variant.

59. The murine SF-1 receptor variant or active fragment of claim 58, comprising the amino acid sequence SEQ ID NO: 15.